Ellhniko Linux Intranet Server HOWTO

Pramod Karnad, `karnad@indiamail.com` v2.11, 7 Aygoustoy 1997

To keimeno ayto perigrafei pws na egkatasthsete ena diktyo Intranet xrhsimopoiwntas to Linux san server poy enopoiei Unix, Netware, NT kai Windows mazi. Etsi, apla epitygxanontas mia sundesh me to Linux, sas parexetai diafanhs prosbash se oles tis diafores platformes. Parexontai leptomereis ejhghseis, gia thn egkatastash HTTP xrhsimopoiwntas ton NCSA server kai gia thn sundesh m'ayton xrhsimopoiwntas TCP/IP clients apo to Novell, Microsoft Windows 3.1, WFWG, Win95, WinNT kai MacTCP se Apple PowerMac.

Contents

1 Eisagwgh

Me apla logia, to **Intranet** einai enas perigrafikos oros poy xrhsimopoieitai gia thn ylopoihsh twn texnologiwn toy Internet mesa se enan etairiko organismo, para gia ejwterikh sundesh me to pagkosmio Internet. Ayth h ylopoihsh pragmatopoieitai me enan tetoio tropo wste paradidei, diafana pros ton xrhsth, ton terastio ogko plhroforiwn enos organismou, se ka8e anejarthto desktop me to mikrotero dynato kostos, xrono kai prospa8eia. To keimeno ayto epixeirei na ejhghsei me aplous oroys pws na egkatasthsete to Intranet xrhsimopoiwntas ergaleia poy einai etoima kai dia8esima, kai genika kostizoyn ligo h ka8oloy.

To keimeno ayto proupo8etei pws hdh jerete pws na egkatasthsete to TCP/IP ston Linux server sas kai na synde8eite fysika sto topiko sas diktyo (LAN), xrhsimopoiwntas mia karta diktuoy Ethernet. Proupo8etei epishs, pws exete mia basikh gnwsh se systhmata Netware, WinNT kai Mac. Oi ry8miseis gia to Netware server deixnontai xrhsimopoiwntas, san bash, thn ekdosh 3.1x. Mporeite na xrhsimopoihsete epishs to INETCFG gia na petuxete to idio apotelesma. Apo thn meria toy client h syzhthsh ginetai me anafora sta Windows 3.1x, Windows gia Workgroups, Win95, WinNT kai to Apple PowerMac.

Xrhsimopoiw tis "idiwtikes" diey8unseis diktuoy (RFC-1918) 172.16.0.0 kai 172.17.0.0 mono san paradeigma. Mporeite na dialejete katallhles diey8unseis analoga me thn egkatastash kai tis ry8miseis sas.

```
Linux       Netware     WFWG/WinNT
Server      Server      Server
```

```
     172.16.0.1   172.16.0.2   172.16.0.3
        |           |           |    172.16.0.0
------+-----+-----+--------+--+-------------
            |              | 172.16.0.254
          W/S 1          Router
        172.16.0.5         | 172.17.0.254
                           |
                  ----------+-------+--------
            172.17.0.0             |
                                 W/S 2
                               172.17.0.5
```

1.1 Ti apaiteitai

8a xreiasteite ta parakatw programmata (software) prin epixeirhsete thn egkatastash.

- To logismiko HTTP server poy mporeite na to katebasete apo to OneStep NCSA HTTPd Downloader sto `http://hoohoo.ncsa.uiuc.edu/docs/setup/OneStep.html`.
- To Novell Netware Client poy einai dia8esimos sto `HTTP://support.novell.com/` (Ta TCP/IP arxeia periexontai ston client).
- To Microsoft TCP/IP client poy einai dia8esimos sto `HTTP://www.microsoft.com/`
- To Apple MacTCP client poy einai dia8esimos sto `HTTP://www.apple.com/`
- WWW Browsers opws to Netscape sto `HTTP://home.netscape.com/` h ton MS Internet Explorer sto `HTTP://www.microsoft.com/` h to NCSA Mosaic sto `http://www.ncsa.uiuc.edu/SDG/Software/Mosaic/NCSAMosaicHome.html`

1.2 Nees ekdoseis aytou toy keimenoy

Nees ekdoseis toy Linux Intranet Server HOWTO 8a stelnontai periodika sto comp.os.linux.announce kai comp.os.linux.help. Epishs 8a stelnontai se diafora Linux FTP sites, opws to sunsite.unc.edu.

H teleytaia ekdosh aytou toy keimenoy brisketai se morfh HTML sto `http://www.inet.co.th/cyberclub/karnadp/http.html`

1.3 Anadrash (Feedback)

Gia sxolia, parathrhseis, dior8wseis, enhmerwseis peri ths Ellhnikhs metafrashs aytou toy HOWTO, steilte email sthn Boula Sanida : `voulariba@hellug.gr` h ston Eyripidh Papakwsta : `evris@hellug.gr` kai enallaktika : `ep@rocketmail.com`

An exete erwthseis h sxolia panw s'ayto to keimeno, mh distasete na steilete e-mail ston Pramod Karnad, sto `karnad@indiamail.com`. Protaseis, kritikh kai mail, einai panta eyprosdekta. An breite kapoio la8os sto keimeno, parakalw enhmerwste me wste na to dior8wsw sthn epomenh ekdosh.

2 Egkatastash toy HTTP server

Otan katebazete (download) ton server, exete duo epiloges: Na parete ton kwdika kai na kanete metaglwttish (compile) monoi sas, h na parete ta prometaglwttismena ektelesima arxeia. Ta prometaglwttismena ektelesima arxeia gia ekdosh Linux (ELF) briskontai sto NCSA alla oxi kai oi palaioteres ekdoseis toys.

2.1 Proetoimasia prin to downloading

O server sto NCSA 8a sas odhghsei mesw bhmatwn stis diafores epiloges ry8misewn kai 8a etoimasei ta diafora arxeia gia sas. Alla prin epixeirhsete to download toy HTTPd na eiste etoimoi na apanthsete stis akoloy8es erwthseis.

2.1.1 To Leitoyrgiko Susthma

Prwta prepei na dialejete an 8a katebasete ton kwdika h thn prometaglwttismenh ekdosh. An to sygkekrimeno susthma sas den emfanizetai sto menou, tote prepei na parete to proka8orismeno kwdika, kai na kanete metaglwttish monoi sas.

Gia na elegjete thn ekdosh toy Linux sas phgainete sth grammh entolhs, sto Linux mhxanhma sas kai plhktrologhste:

```
linux:~$  uname -a
```

kai 8a apokri8ei me mia grammh poy moiazei me thn ejhs :

```
linux:~$  uname -a
Linux linux 2.0.29 #4 Tue Sep 13 04:05:51 CDT 1994 i586
linux:~$
```

H ekdosh toy Linux einai 2.0.29.

Oi ypoloipes parametroi mporoun na ka8oristoun prin to downloading, h na ry8mistoun argotera, tropopoiwntas to arxeio `srm.conf` poy brisketai ston katalogo `/usr/local/etc/httpd/conf` . Ta onomata twn pragmatikwn directives poy emfanizontai sto arxeio `httpd.conf` fainontai mesa se agkules (brackets). H monh ejairesh einai to directive DocumentRoot to opoio emfanizetai sto arxeio `srm.conf`

2.1.2 Tupos ths Diergasias (ServerType)

Ayto ka8orizei pws 8a trejei to mhxanhma sas ton HTTPd server. H protimoterh me8odos einai "standalone". Ayto kanei ton daimona HTTP na trexei synexws. An dialejete na trejete ton HTTPd me "inetd", tote o server 8a janafortwnetai sthn mnhmh me ka8e klhsh toy, to opoio 8a meiwsei thn taxuthta toy server sas.

2.1.3 Binding Port (Port)

Ayto ka8orizei se pio port toy mhxanhmatos sas o daimonas HTTPd 8a proskollh8ei (bind) kai 8a akouei(listen) gia aithseis tupoy HTTP. An mporeite mpeite san "root", xrhsimopoihste thn proka8orismenh timh poy einai to 80, alliws dialejte kati metaju 1025 kai 65535.

2.1.4 Taytothta xrhsth toy Server user identity (User)

Ayth einai h taytothta toy xrhsth ston opoio 8a allazei o server otan apanta se aithseis kai prosbash se arxeia. Ayth h erwthsh xreiazetai na apanth8ei mono an trexete server san "standalone". An eiste kapoios xwris dikaiwmata root, apla xrhsimopoihste to diko sas onoma xrhsth. An eiste o diaxeirisths toy systhmatos, mporei na 8elete na dhmioyrghsete ena eidiko xrhsth wste na mporeite na elegxete ta dikaiwmata twn arxeiwn.

2.1.5 Taytothta group toy xrhsth toy Server(Group)

Ayth einai h taytothta toy group (group id) poy o server 8a xrhsimopoihsei otan apantaei se aithseis kai energei panw se arxeia. Einai paromoia me thn Server User identity kai efarmozetai mono an trexete ton server se "standalone".

An den exete dikaiwmata root, xrhsimopoihste to onoma toy kyrioy group sas. Mporeite na breite to diko sas group plhktrologwntas **groups** sth grammh entolhs toy Linux.

2.1.6 Dieu8ynsh email toy diaxeiristh toy Server (ServerAdmin)

Ayth einai h dieu8ynsh email sthn opoia o xrhsths 8a prepei na stelnei email otan 8elei na anaferei ena problhma me ton server. Mporeite na balete thn proswpikh sas e-mail dieu8ynsh .

2.1.7 Topo8esia toy katalogoy toy server(ServerRoot)

Edw einai to meros poy o server "ka8etai" sto susthma sas. An exete root permissions afhste ton sthn proteinomenh topo8esia `/usr/local/etc/httpd`. An den mporeite na mpeite san root, dialejte enan ypo-katalogo sto diko sas monopati (home path). Mporeite na breite to path toy home katalogoy sas me thn entolh **pwd**.

2.1.8 Topo8esia twn arxeiwn HTML (DocumentRoot)

Edw einai to meros opoy briskontai ta arxeia HTML poy 8a parexontai. H proka8orismenh topo8esia toys einai sto `/usr/local/etc/httpd/htdocs`. 8a mporousate, parola ayta, na to orisete na einai o home katalogos toy eidikou xrhsth poy epilejate sto Server user identity, h kapoios ypo-katalogos toy dikou sas home katalogoy, an den mporeite na mpeite san root.

Otan exete amfibolies, xrhsimopoihste tis proka8orismenes times. Twra poy exete tis apanthseis stis parapanw erwthseis, mporeite na kanete Download to NCSA HTTPd apo to `http://hoohoo.ncsa.uiuc.edu/docs/setup/OneStep.html`. 8a prepei epishs na diabasete thn tekmhriwsh toy HTTPd sto `http://hoohoo.ncsa.uiuc.edu/docs/` prin jekinhsete thn egkatastash. An sxediazete na kanete metaglwttish toy kwdika, tote prepei na tropopoihsete ta makefiles se ka8ena apo toys treis katalogoys `support, src, cgi-src`. An h ekdosh toy Linux einai hdh yposthrizomenh, tote 8a prepei na plhktrologhsete **make linux** ston panw katalogo (i.e. `/usr/local/etc/httpd`)

2.2 Metaglwttish toy HTTPd

H metaglwttish einai aplh, apla plhktrologhste `make linux` sthn endeijh (prompt), ston arxiko katalogo toy server. **Shmeiwsh:** Oi xrhstes toy pre-ELF Linux prepei na bgaloyn ta sxolia sto `#define NO_PASS`, apo to arxeio `portability.h` kai na 8esoyn `DBM_LIBS= -ldbm` sto `Makefile` prin kanoyn metaglwttish toy HTTPd.

3 Dokimh toy HTTPd

Afou exete egkatasthsei ton HTTPd, mpeite san root kai jekinhste ton, plhktrologwntas **httpd &** . (Ypo8etontas oti ton egkatasthsate san standalone) 8a prepei na mporeite pleon na ton deite sth lista poy prokuptei apo thn entolh **ps**. O aplousteros tropos gia na dokimasete ton HTTPd einai me Telnet. Sth grammh entolwn toy Linux plhktrologhste

```
linux:~$  telnet 172.16.0.1 80
```

opoy 80 einai h proka8orismenh 8ura (port) gia to HTTP. An exete ry8misei to "Port" se kati diaforetiko, tote plhktrologhste ayto to noumero. 8a prepei na parete mia apanthsh, paromoia me thn akoloy8h

```
Trying 172.16.0.1...
Connected to linux.mydomain.
Escape character is '^]'.
```

Twra, an plhktrologhsete opoiondhpote xarakthra kai pathsete to Enter, 8a prepei na parete mia apanthsh san ki aythn poy akoloy8ei:

```
HTTP/1.0 400 Bad Request
Date: Wed, 10 Jan 1996 10:24:37 GMT
Server: NCSA/1.5
Content-type: text/html

<HEAD><TITLE>400 Bad Request < /TITLE> < /HEAD>
<BODY><H1>400 Bad Request < /H1>
Your client sent a query that this server could
not understand.<P>
Reason: Invalid or unsupported method.<P>
< /BODY>
```

Twra eimaste etoimoi na synde8oume me ayton ton server xrhsimopoiwntas kapoio allo PC kai enan WWW Browser.

4 Sundesh me ton Linux Server

Parakalw anatrejte sto diagramma poy yparxei sto kefalaio 1 (Eisagwgh) gia to sxhma diey8unsewn poy xrhsimopoieite. O Sta8mos Ergasias 1 (W/S1) brisketai sto 172.16.0.0 kai mporei na prospelasei ton Linux server ap' ey8eias enw o Sta8mos Ergasias 2 (W/S2) brisketai sto 172.17.0.0 kai xreiazetai thn xrhsh pulhs (gateway) (router) 172.17.0.254 gia na prospelasei to Linux box. Aytes oi plhrofories gia thn pulh (gateway) xreiazetai na parexontai kata thn ru8mish twn clients mono sto W/S2. To Netware anaferei thn pulh san 'ip_router'.

Xrhsimopoiw to W/S2 gia na dieykrinisw tis ry8miseis toy client. Gia na ry8misete to W/S1 allajte thn dieu8ynsh 172.17.0.5 se 172.16.0.5 kai agnohste oles tis anafores se pules/dromologhtes (gateway/router).

Ean den exete router mporeite na phdhjete to epomeno tmhma kai na proxwrhsete se

- 4.2 (Ru8mish toy Netware Server) Ean xrhsimopoieite Netware server.
- 4.4 (Ru8mish twn MS Windows Client) Ean xrhsimopoieite Microsoft Client.

4.1 Ru8mish toy Linux server

Mporeite na phdhjete ayto to tmhma an den exete router.

Prepei na ry8misete ton Linux server na anagnwrizei ton router epitrepontas to sta8mo ergasias 2 na synde8ei ston Web server. Gia na ry8misete ton Linux server prepei na mpeite san root. Sth grammh entolhs toy server plhktrologhste:

```
route add gw default 172.16.0.254
```

Gia na xrhsimopoieite ayth thn pulh (gateway) ka8e fora poy epanekkineite ton Linux server anoijte to arxeio `/etc/rc.d/rc.inet1` kai allajte thn grammh poy periexei ton orismo ths gateway se `GATEWAY = "172.16.0.254"`. Sigoyreyteite oti h grammh h opoia pros8etei to gateway den einai se sxolia.

ENALLAKTIKA: Mporeite na pros8esete routes sta diktya apo thn allh meria toy router. Ayto ginetai ws ejhs

```
route add -net 172.17.0.0 gw 172.16.0.254
```

Gia na ginetai ayto aytomata ka8e fora poy kanete epanekkinhsh toy Linux pros8este thn parapanw entolh sto arxeio `/etc/rc.d/rc.local`.

4.2 Ru8mish toy Netware server

Gia na ry8misete ton Netware server prepei na exete dikaiwmata Supervisor h toylaxiston dikaiwmata Console operator . An ayto den einai dynaton, rwthste ton Administrator toy diktuoy gia na sas boh8hsei me tis ry8miseis. Ston Server energopoihste to Ethernet_II frame sto LAN, plhktrologwntas tis parakatw entoles h symperilabete aytes sto arxeio AUTOEXEC.ncf .

```
load NE2000 frame=Ethernet_II name=IPNET
load TCPIP
bind IP to IPNET addr=172.16.0.2 mask=FF.FF.FF.0
```

Isws xreiastei na ka8orisete to slot h to board number ka8ws fortwnetai o NE2000 driver, ejartatai apo tis ry8miseis toy mhxanhmatos sas. (p.x.: load NE2000 slot=3 frame=.....)

4.3 Ry8mizontas ton Netware Client

Sto PC exete na epilejete metaju twn Win3.1,WFWG h Win95. H diadikasia egkatastashs diaferei anamesa se Win95 kai sta palaiotera windows, an xrhsimopoieite ton 32mpito client ths Microsoft h ths Novell. An prokeitai na xrhsimopoihsete ton 16mpito client, h diadikasia einai h idia kai mporeite na anafer8eite stis odhgies egkatastashs twn Windows 3.x . Gia na egkatasthsete ton 32mpito client gia ta Win95 phgainete kat' ey8eian sto 4.3.2 (Egkatastash twn Windows 95).

4.3.1 Windows 3.x

An xrhsimopoieite Win3.1 h WFWG mporeite na egkatasthsete ton Netware Client (VLMs) kai orismena epipleon arxeia poy parexontai me thn disketa toy TCP/IP, onomati

TCPIP.exe, VTCPIP.386, WINSOCK.dll and WLIBSOCK.dll

prosejte oti to arxeio WINSOCK.dll diaferei apo ayta poy parexontai apo ta Win95 kai to Trumpet. Egkatasthste to Netware Client me yposthrijh gia windows. Antigracte ta VTCPIP.386, WINSOCK.dll kai WLIBSOCK.dll ston katalogo SYSTEM, kai to TCPIP.exe ston katalogo NWCLIENT. Twra tropopoihste to arxeio STARTNET.bat ston katalogo NWCLIENT se

```
lsl
ne2000     ---> o driver ths kartes diktuoy
c:\windows\odihlp.exe     ---->An xrhsimopoieite WFWG
ipxodi
tcpip        ---> Pros8este ayth thn grammh
nwip         ---> An xrhsimopoieite Netware/IP
vlm
```

Dhmioyrghste enan ypo-katalogo (estw) `\NET\TCP` kai antigracte ta arxeia HOSTS, NETWORKS, PROTOCOLS kai SERVICES apo `/etc` ston Linux server h ston katalogo `SYS:ETC` ston Netware server. Anoijte to antigrammeno arxeio HOSTS gia na pros8esete thn grammh gia ton neo Linux server sas. Ayto 8a sas epitrepei na anafereste ston Linux server sas, san `http://linux.mydomain/` anti`http://172.16.0.1/`ston WWW browser

```
127.0.0.1      localhost
172.16.0.1      linux.mydomain
```

Dior8wste to arxeio NET.cfg ston katalogo NWCLIENT

```
    Link Driver NE2000
        port 300
        int 3
        MEM D0000
        FRAME Ethernet_802.2

 ; ---- Pros8este aytes tis grammes ----

       FRAME Ethernet_II

    Protocol TCPIP
       PATH TCP_CFG C:\NET\TCP
       ip_address  172.17.0.5
       ip_netmask  255.255.255.0
       ip_router   172.17.0.254     ---> add the address of your gateway only
                                   ---> if you have to use this
                                   ---> gateway to reach your HTTP server

    Link Support
       MemPool 6192       ---> the minimum is 1024. Try with different values
       Buffers 10 1580    ---> this again can be fine tuned

 ;---------------------------------
 ; You may need to add lines like these if you are using Netware/IP
 ;
    NWIP
       NWIP_DOMAIN_NAME  mydomain
       NSQ_BROADCAST   ON
       NWIP1_1 COMPATIBILITY   OFF
       AUTORETRIES     1
       AUTORETRY SECS  10
```

Dior8wste to arxeio SYSTEM.ini ston katalogo WINDOWS kai pros8este to ejhs gia to VTCPIP.386

```
[386Enh]
.....
network=*vnetbios, vipx.386, vnetware.386, VTCPIP.386
.....
```

Epanekkinhste to PC, trejte to STARTNET.bat kai twra pleon mporeite na anoijete ton agaphmeno sas WWW browser gia na deite tis Web selides sas. De xreiazetai na mpeite sto Netware kai de xreiazetai na trejete to TCPMAN (an xrhsimopoieite Trumpet Winsock).

4.3.2 Windows 95

To tmhma ayto ejhgei pws na egkatasthsete ton 32mpito client sta Win95. Prwta prepei na egkatasthsete ta akoloy8a.

```
Client for Netware Networks (apo thn Microsoft h thn Novell)
Microsoft TCP/IP Protocol
Network Adapter
```

Gia na egkatasthsete ta parapanw, klikarete sto My Computer, Control Panel, Networks. Pathste to Add. 8a prepei twra na eisaste se ena para8yro poy apeikonizei Client, Adapter, Protocol kai Service. Gia na egkatasthsete ton Client gia Diktya Netware:

```
1. Diploklikarete ston Client
2. Klikarete sto Microsoft h Novell
3. Diploklikarete ston Client gia Diktya Netware
```

Gia na egkatasthsete to prwtokollo TCP/IP:

```
1. Diploklikarete sto Protocol
2. Klikarete sto Microsoft
3. Diploklikarete sto TCP/IP
```

Ta Windows95 8a egkatasthsoyn aytomata kai orismena alla prwtokolla. Apomakrunete ta, klikarontas panw s'ayta kai sthn synexeia patwntas me to pontiki to koympi remove. Kanonika ta Win95 egka8istoun to prwtokollo Microsoft NetBeui, kai to symbato me IPX/SPX prwtokollo. Mporeite na sbhsete to prwtokollo NetBEUI, alla 8a xreiasteite to prwtokollo IPX/SPX, an 8elete na mpainete ston Netware Server.

Gia na ry8misete to TCP/IP klikarete sto TCP/IP, klikarete sto Properties kai sth selida IP address

```
Balte thn dikh sas dieu8ynsh IP sto "Specify an IP address "
                      box as 172.17.0.5
Sth grammh Subnet Mask balte 255.255.255.0
```

Epilejte to tab Gateway

```
Balte thn dieu8ynsh toy gateway (router) sto koytaki New gateway
   san 172.17.0.254
Klikarete sto koympi Add
```

H dieu8ynsh toy gateway prepei twra na emfanizetai katw apo ta hdh egkatesthmena gateways. Pathste OK.

8a parete ena mhnyma gia epanekkinhsh toy ypologisth sas. Kante to.8a mporeite pleon na xrhsimopoihsete enan Browser gia na synde8eite ston HTTP Server.

4.4 Ru8mish Microsoft Client

An xrhsimopoieite Microsoft Client gia prosbash sto diktyo sas, tote ayth h enothta perigrafei to pws 8a egkatasthsete to TCP/IP

- 4.4.1 (Windows gia Workgroups (WFWG))
- 4.4.2 (Windows 95)

- 4.4.3 (Windows NT 4.0)

Shmeiwsh: Gia na mporeite na anafereste ston Linux server san `http://linux.mydomain/` anti`http://172.16.0.1/` se enan WWW browser kai se oles tis entoles toy intranet prepei na dior8wsete to arxeio `hosts`. Mporeite epishs na pros8esete panw apo mia eggrafes gia ka8e ena apo ta alla hosts sas (Netware, Unix, WinNT). H oikogeneia twn Windows krataei ta arxeia HOSTS ston katalogo `\WINDOWS` h sto `\WINDOWS\SYSTEM`analoga me thn ekdosh. Dior8wste to arxeio ayto kai pros8este mia grammh gia ton Linux server sas, opws:

```
127.0.0.1       localhost
172.16.0.1      linux.mydomain

172.16.0.2      netware.mydomain
172.16.0.3      winNT.mydomain
172.16.0.5      ws_1
```

4.4.1 Windows gia Workgroups

H enothta ayth ejhgei pws na egkatasthsete ton 32mpito client se WFWG. Prwta prepei na katebasete toys odhgous TCP/IP gia Windows apo thn Microsoft. H version 3.11b einai dia8esimh sto `ftp://ftp.microsoft.com` h se alla site ws `tcp32b.exe`. Sigoyreyteite oti exete fortwsei taWin32s prin prospa8hsete na fortwsete ton TCP/IP-32mpito odhgo.

Exontas aposympiesei ta arxeia toy TCP/IP se enan proswrino katalogo (as poume `C:\TEMP`), elegjte ton katalogo `\WINDOWS\SYSTEM` gia antigrafa toy `OEMSETUP.INF`. An yparxei kapoio, metonomaste to. Twra antigracte to arxeio `OEMSETUP.INF` apo ton katalogo TEMP ston katalogo `\WINDOWS\SYSTEM`. An exete fortwsei ki alla TCP/IP stacks sto susthma sas, sbhste ta prin proxwrhsete.

Ekkinhsh toy Network Setup h toy Windows Setup/Change Network Settings

```
Pathste to koympi Networks
Pathste to Install Microsoft Windows Network.
  Dialejte yposthrijh gia epipleon diktya (An apaiteitai)
Click OK
```

Prepei na sas zhth8ei network adapter - Dialejte ton katallhlo. An den sas zhth8ei:

```
Click sto Adapter button
    Dialejte adapter (p.x: NE2000)
    Click OK
Click sto Protocol button
    dialejte to MS TCP/IP-32 protocol
    click OK
```

Twra 8a sas zhth8ei na ry8misete to TCP/IP protocol stack. Mporeite panta na allajete thn ru8mish sas epilegontas me aplo click sto TCP/IP protocol poy fainetai sto koytaki Adapters kai kanontas click sto koympi Setup.

```
Sto IP address box balte 172.17.0.5
Sto Subnet Mask box balte 255.255.255.0
Balte thn dieu8ynsh toy gateway (router) sto koytaki me ta gateway
  san 172.17.0.254
```

Pathste OK.8a sas zhth8ei na epanekkinhsete ton ypologisth sas. Kante to. 8a prepei pleon na mporeite na xrhsimopoihsete enan Browser gia na synde8eite ston HTTP Server.

4.4.2 Windows 95

H enothta ayth ejhgei pws na egkatasthsete ton 32bit client ths Microsoft gia Win95. Prwta prepei na egkatasthsete ta parakatw:

```
Client gia Microsoft Networks
Microsoft TCP/IP Protocol
Network Adapter
```

Gia na egkatasthsete ta parapanw, kante click sto My Computer, Control Panel, Networks. Klikarete to koympi Add. Eisaste twra se ena para8yro poy deixnei tis epiloges Client, Adapter, Protocol kai Service. Gia na egkatasthsete ton Client gia Microsoft Networks:

```
1. Diploklikarete ston Client
2. Klikarete sto Microsoft
3. Diploklikarete ston Client gia Microsoft Networks
```

Gia na egkatasthsete to Prwtokollo TCP/IP :

```
1. Diploklikarete sto Protocol
2. Klikarete sto Microsoft
3. Diploklikarete sto TCP/IP
```

Ta Windows 95 egka8istoun aytomata diafora prwtokolla.Sbhste ta kanontas click s'ayta kai kanontas click sto koympi Remove. Kanonika ta Win95 egka8istoun to prwtokollo Microsoft NetBeui.

Gia na egkatasthsete to TCP/IP kante click sto TCP/IP, sto Properties kai sthn synexeia sto tab IP address

```
Balte to diko sas IP address sto "Specify an IP address "
                      koytaki san 172.17.0.5
Sto Subnet Mask box balte 255.255.255.0
```

Epilejte to tab Gateway

```
Balte thn dieu8ynsh toy gateway (router) sto koytaki New gateway
   san 172.17.0.254
Klikarete sto koympi Add
```

H dieu8ynsh toy gateway 8a prepei twra na emfanizetai sta hdh egkatesthmena gateways box. Klikarete sto OK.

8a sas zhth8ei na epanekkinhsete ton ypologisth sas. Kante to.8a prepei pleon na mporeite na xrhsimopoihsete enan Browser gia na synde8eite ston HTTP Server.

4.4.3 Windows NT

H enothta ayth perilambanei leptomereies gia to pws na egkatasthsete tonTCP/IP client gia WinNT 4.0. Phgainete sto Control Panel/ Network

```
Epilejte to Adapter tab.
    Klikarete sto koympi Add gia na pros8esete neo adapter (Ean den exete hdh enan)
```

8a sas zhth8ei network adapter - Dialejte ton katallhlo.Gia na pros8esete prwtokolla.

```
Epilejte to Protocols tab
    Klikarete sto Add
    Epilejte to TCP/IP protocol
    Klikarete sto OK
```

Twra 8a sas zhth8ei na ry8misete to TCP/IP protocol stack. Mporeite panta na allajete thn ru8mish sas epilegontas me aplo click sto TCP/IP protocol kai kanontas click sto koympi properties.

```
Dialejte to tab IP Address
   Tsekarete sto checkbox 'Specify an IP address'
   Sto IP address box balte 172.17.0.5
   Sto Subnet Mask box balte 255.255.255.0
   Balte thn dieu8ynsh toy gateway (router) sto koytaki Default Gateway
       san 172.17.0.254
```

Pathste OK. 8a sas zhth8ei na epanekkinhsete ton ypologisth sas. Kante to. 8a prepei pleon na mporeite na xrhsimopoihsete enan Browser gia na synde8eite ston HTTP Server.

4.5 Egkatastash TCP/IP se Macintosh

An xrhsimopoieite Macintosh gia prosbash sto diktyo, ayth h enothta periexei leptomereies gia to pws na egkatasthsete to MacTCP gia PowerMacs.

Shmeiwsh: Gia na mporeite na anafereste ston Linux server san `http://linux.mydomain/` anti `http://172.16.0.1/` se kapoion WWW browser ka8ws kai se oles tis entoles toy intranet xreiazetai na kanete edit to arxeio `hosts`. To format toy arxeioy hosts einai diaforetiko apo ayto poy xrhsimopoieitai sto Unix. To arxeio hosts sto Mac basizetai sto RFC-1035. Mporeite epishs na xrhsimopoihsete parapanw eisodoys gia ka8e ena apo ta hosts (Netware, Unix, WinNT). To MacOS krataei to arxeio HOSTS sto `Preferences folder` katw apo to `System folder`. Kante edit to arxeio ayto kai pros8este mia grammh gia ton Linux server opws:

```
linux.mydomain    A  172.16.0.1

netware.mydomain  A  172.16.0.2
winNT.mydomain    A  172.16.0.3
ws_1              A  172.16.0.5
```

4.5.1 MacTCP

H enothta ayth ejhgei pws na egkatasthsete to MacTCP. Prwta prepei na katebaste ta MacTCP arxeia apo thn Apple h na to egkatasthsete apo to Internet Connection CD. Gia na ry8misete to MacTCP, kante click sto Apple Menu/ Control Panels/ TCP/IP. Sthn o8onh allajte thn ru8mish gia to'Connect via:' se 'Ethernet'

Allajte thn ru8mish 'Configure' se 'Manually'

```
Sto IP address box balte 172.17.0.5
Sto Subnet Mask box balte 255.255.255.0
Balte thn dieu8ynsh toy gateway (router) sto koytaki
Router address san 172.17.0.254
```

Pathste OK. 8a prepei pleon na mporeite na xrhsimopoihsete enan Browser gia na synde8eite ston HTTP Server.

5 Egka8istwntas to Intranet

Ena Intranet den mporei na oloklhrw8ei an oi phges (resources) den einai koines(shared) se oles tis diaforetikes platformes. 8a xreiasteite yposthrijh gia alla filesystems, wste na mporeite na prospelasete tis plhrofories poy einai dia8esimes s'aytes. Ayto to keimeno parexei odhgies gia na syndesete to Linux me ta akoloy8a dhmofilh filesystems.

- 5.1 (NCP filesystem for Netware)
- 5.2 (SMB filesystem for Windows)
- 5.3 (NFS filesystem for Unix)

Ayta ta filesystems mporei na ginoyn compile se pyrhna Linux h na proste8oun san modules, ejartatai apo thn ekdosh toy Linux. An den gnwrizetee kala na kanete compile ton pyrhna mporeite na koitajete sto Kernel HOWTO `http://sunsite.unc.edu/mdw/HOWTO/Kernel-HOWTO.html` kai sto Module HOWTO `http://sunsite.unc.edu/mdw/HOWTO/Module-HOWTO.html` gia na kanete compile ton pyrhna me modules.

5.1 NCPFS

Gia na moirastoun ta arxeia toy Netware server 8a xreiastei yposthrijh gia NCP (ncpfs). To NCPFS doyleuei me ekdosh pyrhna 1.2.x kai 1.3.71 kai panw. Den doyleuei me opoiadhpote palaioterh ekdosh pyrhna 1.3.x. Den mporei na exei prosbash sthn NDS database se Netware 4.x, alla mporei na kanei xrhsh aytou toy bindery. An xrhsimopoieite Netware 4.x mporeite na energopoihsete thn yposthrijh bindery gia sygkekrimena containers xrhsimopoiwntas thn entolh `Set Bindery Context` sthn konsola san:

```
set Bindery Context = CORP.MYDOM;WEBUSER.MYDOM
```

Sto parapanw paradeigma energopoih8hke h yposthrijh bindery gia dyo periexomena.

8a xreiastei na katebasete ta NCP filesystem utilities apo to URL: `ftp://sunsite.unc.edu/pub/Linux/system/filesystems/ncpfs/ncpfs.tgz` (trexoysa ekdosh ncpfs-2.0.10) apo to Sunsite.

5.1.1 Egkatastash

Gia na egkatasthsete ta ncpfs utilities, plhktrologhste

```
zcat ncpfs.tgz | tar xvf -
```

gia na epekteinete ta arxeia sto idio toys ton katalogo. Sthn periptwsh ayth 8a parete enan katalogo `ncpfs-2.0.10` allajte ton katalogo sas s'ayto ton katalogo ncpfs prin proxwrhsete me thn egkatastash. Diabaste to arxeio README kai ftiajte to Makefile an xreiazetai.

H egkatastash twn ncpfs ejartatai apo thn ekdosh toy pyrhna poy xrhsimopoieite. Gia ton pyrhna 1.2, apla gracte 'make'. Epomenws, grafontas 'make install' 8a egkatasthsei ta ektelesima kai ta man pages.

An xrhsimopoieite pyrhna 1.3.71 kai panw, isws na prepei na kanete jana compile ton pyrhna. Me aytous toys pyrhnes, to kommati toy pyrhna toy ncpfs symperilambanetai hdh sto kyriws dendro toy kwdika. Gia na elegjete an o pyrhnas xreiazetai jana compile plhktrologhste:

```
cat /proc/filesystems
```

Prepei na sas deijei mia grammh poy na leei oti o pyrhnas jerei to ncpfs.

An to ncpfs den einai ekei, mporeite eite na janakanete compile ton pyrhna h na pros8esete to ncpfs san module. Gia na janakanete compile ton pyrhna plhktrologhste 'make config' kai otan sas rwthsei gia

`To Prwtokollo IPX (CONFIG_IPX) [N/y/?]`

apanthste 'y'. Pi8anws den xreiazeste to oloklhro to eswteriko diktyo gia to opoio, sas rwtaei meta. Mias kai o pyrhnas exei egkatasta8ei epityxws, epanekkinhste ton H/Y, elegjte to `/proc/filesystems` kai an ola einai OK, proxwrhste me thn egkatastash twn ncpfs utilities. Allajte katalogo sthn perioxh poy exete katebasei hdh ta arxeia ncpfs, kai plhktrologhste 'make'. Meta th metaglwttish, gracte 'make install' gia na egkatasthsete ta diafora boh8htika programmata kai tis selides boh8eias.

5.1.2 Mounting NCPFS

Gia na elegjete thn egkatastash plhktrologhste:

```
ipx_configure --auto_interface=on --auto_primary=on

....perimenete 10 deyterolepta kai gracte

slist
```

8a prepei na mporeite na deite mia lista me ta onomata twn Netware servers. Twra eimaste etoimoi na moirastoume arxeia me ton Netware server.

As ypo8esoyme oti 8eloyme na exoyme prosbash se arxeia HTML apo ton katalogo `\home\htmldocs` sto volume VOL1: ston server MYDOM_NW. Synistatai na dhmioyrghsete enan neo xrhsth (as poume) 'EXPORT' me password 'EXP123' sto server ayto ston opoio na dwsete katallhla dikaiwmata s'ayton ton katalogo xrhsimopoiwntas to SYSCON h to NWADMIN.

Sto mhxanhma Linux dhmioyrghste enan neo katalogo `/mnt/MYDOM_NW`. Twra plhktrologhste thn entolh:

```
ncpmount -S MYDOM_NW -U EXPORT -P EXP123 /mnt/MYDOM_NW
```

gia na prosarthsete to susthma arxeiwn netware. Me thn entolh

```
ls /mnt/MYDOM_NW/vol1/home/htmldocs
```

8a deite mia lista me ola ta arxeia sto`MYDOM_NW/VOL1:\HOME\HTMLDOCS` (xrhsimopoiwntas thn shmeiografia toy Netware). An exete problhmata diabaste to IPX HOWTO sto `http://sunsite.unc.edu/mdw/HOWTO/IPX-HOWTO.html` gia perissotera panw se systhmata IPX.

5.2 SMBFS

Gia na moirasteite arxeia me ton Windows server 8a xreiasteite yposthrijh gia SMB (smbfs).

8a xreiastei na katebasete tis boh8htikes efarmoges gia systhmata arxeiwn SMB apo to: `ftp://sunsite.unc.edu/pub/Linux/system/filesystems/smbfs/smbfs.tgz` (trexoysa ekdosh smbfs-2.0.1) apo to Sunsite.

5.2.1 Egkatastash

Gia na egkatasthsete tis boh8htikes efarmoges smbfs, gracte

```
zcat smbfs.tgz | tar xvf -
```

gia na aposympiesei ta arxeia ston idio toy ton katalogo. Tote 8a prepei na exei dhmioyrgh8ei o katalogos `smbfs-2.0.1`. Phgainete ston katalogo smbfs prin proxwrhsete me thn egkatastash. Diabaste to arxeio README, kai allajte to Makefile an xreiazetai.

H egkatastash toy smbfs ejartatai apo thn ekdosh toy pyrhna poy xrhsimopoieite. Gia ton pyrhna 1.2, aplws plhktrologhste 'make'. Epomenws, grafontas 'make install' 8a egkatasthsei ta ektelesima kai tis selides boh8eias.

An xrhsimopoieite pyrhna 2.0 kai panw, isws na prepei na janametaglwttisete ton pyrhna. Me aytous toys pyrhnes, to kommati toy pyrhna toy smbfs perilambanete hdh sto kyriws dendro toy kwdika. Gia na elegjete an o pyrhnas sas xreiazetai na janametaglwttistei gracte:

```
cat /proc/filesystems
```

8a prepei na sas dinei mia grammh poy na leei oti o pyrhnas sas gnwrizei to smbfs.

An to smbfs den yparxei, prepei eite na janakanete compile ton pyrhna h na pros8esete to smbfs san module. Gia na janametaglwttisete ton pyrhna prepei na gracete 'make config' kai otan sas rwthsei gia na pros8esei yposthrijh gia susthma arxeiwn SMB, aplws apanthste yes. Afou o pyrhnas sas exei egkatasta8ei epityxws, epanekkinhste, elegjte to `/proc/filesystems`kai an ola einai entajei, proxwrhste sthn egkatastash twn boh8htikwn efarmogwn smbfs. Allajte katalogo sthn perioxh poy exete katebasei ta arxeia toy smbfs, kai gracte 'make'. Afou teleiwsei h metaglwttish, gracte 'make install' gia na egkatasthsete tis diafores boh8htikes efarmoges kai tis selides boh8eias.

5.2.2 Mounting SMBFS

Gia to paradeigma mas, as ypo8esoyme oti o WinNT server legetai 'MYDOM_NT' kai moirazetai(sharing) ton katalogo `C:\PUB\HTMLDOCS` me to koino (share) onoma 'HTMLDOCS' xwris password. Dhmioyrghste sto Linux enan neo katalogo `/mnt/MYDOM_NT`. Twra gracte thn entolh

```
smbmount //MYDOM_NT/HTMLDOCS /mnt/MYDOM_NT -n
```

gia na prosarthsete to susthma arxeiwn SMB (windows share). An ayto de doyleuei, prospa8hste to

```
smbmount //MYDOM_NT/COMMON /mnt/MYDOM_NT -n -I 172.16.0.3
```

Plhktrologwntas thn entolh

```
ls /mnt/MYDOM_NT
```

8a sas deijei mia lista olwn twn arxeiwn sto `bsol;bsol;MYDOM_NT\PUB\HTMLDOCS` (xrhsimopoiwntas thn shmeiografia twn Windows).

5.3 NFS

Prwta 8a xreiasteite ena pyrhna me to susthma arxeiwn NFS h metaglwttismeno (compiled) h dia8esimo san module.

As ypo8esoyme oti exoyme enan Unix host poy trexei NFS me to onoma MYDOM_UNIX kai IP dieu8ynsh 172.16.0.4. Mporeite na deite toys katalogoys poy moirazontai apo ayton me thn entolh

```
showmount -e 172.16.0.4
```

Afou jeroyme toys katalogoys poy moirazetai, mporeite na toys prosarthsete eisagontas mia katallhlh entolh. Synistatai na dhmioyrghsete enan ypokatalogo katw apo to '/mnt' (As poume) 'MYDOM_UNIX' kai na to xrhsimopoihsete san to shmeio prosarthshs.

```
mount -o rsize=1024,wsize=1024 172.16.0.4:/pub/htmldocs /mnt/MYDOM_UNIX
```

Ta rsize kai wsize mporei na 8eloyn allagh, analoga me periballon sas.

An exete problhmata diabaste to NFS HOWTO sto `http://sunsite.unc.edu/mdw/HOWTO/NFS-HOWTO.html` gia perissotera panw sto susthma NFS.

5.4 Prosbash sto Web

Twra poy exoyme egkatasthsei ton HTTP server, toys clients kai exoyme syndesei ton Linux server me alloys servers, prepei na kanoyme orismenes mikroallages ston Linux server gia na mporoume na exoyme prosbash s' ayta ta prosarthmena systhmata arxeiwn apo ton Web Browser.

5.5 Prosbash sta prosarthmena systhmata arxeiwn

Gia na exoyme prosbash se prosarthmenoys katalogoys stis HTML selides sas yparxoyn duo me8odoi:

- Dhmioyrghste ena link sto DocumentRoot (`/usr/local/etc/httpd/htdocs`) gia na anafer8eite ston prosarthmeno katalogo san

```
ln -s /mnt/MYDOM_NW/vol1/home/htmldocs netware
                 h

ln -s /mnt/MYDOM_NT    winNT
                 h

ln -s /mnt/MYDOM_UNIX    unix
```

- Gia na dior8wsete to arxeio `srm.conf` ston katalogo sas `/usr/local/etc/httpd/conf` kai na pros8esete ena neo ceydwnymo (alias).

```
# Alias fakename realname
Alias /icons/     /usr/local/etc/httpd/icons/

# alias for netware server
Alias /netware/   /mnt/MYDOM_NW/vol1/home/htmldocs/
Alias /winNT/     /mnt/MYDOM_NT/
Alias /unix/      /mnt/MYDOM_UNIX
```

kai epanekkinhste ton HTTPd. Mporeite na prospelasete ta keimena ston netware server anaferomenoi s' ayta ws: `http://linux.mydomain/netware/index.htm` gia ta arxeia toy netware kai paromoiws gia ta alla.

5.6 Sundesh sto Internet

Mporeite telika na syndesete to diko sas Intranet sto Internet gia na exete prosbash se E-Mail kai oles tis alles plhrofories poy yparxoyn ekei. Sas proteinw na gracete ena analytiko shmeiwma gia to pws 8a to epanalabete ayto sto mellon. Leptomereis ejhghseis briskontai sto ISP Hookup HOWTO apo to `http://sunsite.unc.edu/mdw/HOWTO/ISP-Hookup-HOWTO.html` kai to Diald mini HOWTO sto `http://sunsite.unc.edu/mdw/HOWTO/mini/Diald` gia na egkatasthsete aytes tis syndeseis.

5.7 Alles xrhseis

O HTTP server mporei na xrhsimopoih8ei sto grafeio gia na parexei diafanh prosbash plhrofories poy briskontai se diaforetiko server, se diafores topo8esies kai katalogoys. Oi plhrofories mporei na einai apla keimena toy word, Lotus spreadsheets, h poluplokes baseis dedomenwn

H efarmogh ayths ths texnologias xrhsimopoieitai kanonika ws ejhs

- Dhmosieuontas enswmatwmena keimenaTa keimena ayta mporei na periexoyn newsletters, ethsies anafores, xartes, dieykolunseis gia th doyleia, listes timwn, plhrofories proiontwn, logotexnia, kai opoiodhpote keimeno ajias mesa se ena etairiko periballon.
- Prosbash se katalogoys pros anazhthshAmesh prosbash se thlefwnikous katalogoys etairias kai paromoia. H plhroforia ayth mporei na apeikonistei se ena Web site h, mesw CGI scripts, poy o Web server mporei na ejyphrethsei san pulh se back-end prouparxoyses h se nees efarmoges. Ayto shmainei oti, xrhsimopoiwntas idioys mhxanismous prosbashs, h plhroforia mporei na ginei pio eyrews dia8esimh kai me aploustero tropo. Ayto shmainei oti mporei na xrhsimopoih8ei gia thn dhmioyrgia enos interface me RDBMS opws h ORACLE kai h SYBASE poy 8a paragei plhrofories pragmatikou xronoy. Edw einai mia lista me paromoia sites sto Web.

  - Web Access - `http://cscsun1.larc.nasa.gov/\~{}beowulf/db/web\_access.html` - CGI gateways - `HTTP://www.w3.org/hypertext/WWW/RDBGate/Overview.html`
- Corporate/Department/Individual pagesKa8ws oi politikes allazoyn mesa stoys organismous sto shmeio poy ka8e tmhma odhgeitai sto na dhmioyrgei ek8eseis ki anafores gia dikh toys eswterikh xrhsh, h texnologia Intranet parexei to idaniko meso gia thn antallagh ths trexoysas plhroforias sto Tmhma h gia ton ka8ena proswpika. Isxyres mhxanes anazhthshs parexoyn ta mesa stoys an8rwpoys na broyn ana omades h atomika poios exei tis apanthseis stis erwthseis poy emfanizontai epaneilhmmena se ka8hmerinh bash kata thn ergasia.
- Aples omadikes efarmogesMe thn yposthrijh HTML forms, ta sites mporoun na parexoyn fulla pros ypografh, katametrhseis kai apla xronodiagrammata.
- Dianomh logismikouOi administrators mporoun na xrhsimopoihsoyn to Intranet gia na paradwsoyn logismiko kai enhmerwmenes kata zhthsh se xrhstes mesw toy enswmatwmenoy diktuoy. Ayto mporei na ginei me 'Java' h opoia epitrepei th dhmioyrgia kai th diafanh dianomh antikeimenwn kata zhthsh apo apla dedomena h efarmoges. Ayto einai pragmatika dynato eykolotera me tis neoteres ekdoseis toy Linux poy exei enswmatwmenh yposthrijh gia Java.
- MailMe thn kinhsh na xrhsimopoihsete Intranet mail proionta me aples kai stantar me8odoys gia attachment keimenwn, hxoy, eikonas kai allwn polymeswn metaju atomwn, to mail prow8eitai akomh perissotero san aplh, de facto me8odos epikoinwnias. To Mail einai oysiastika epikoinwnia apo atomo se atomo, h apo atomo se ena mikro gkroyp. Polles mikres efarmoges einai dia8esimes sthn platforma Linux gia na sthsete ena susthma gia E-mail opws ta **sendmail, pop3d, imapd**.
- User InterfaceH texnologia Intranet anaptussetai toso ragdaia poy ta dia8esima ergaleia, idiaitera h HTML, mporoun na xrhsimopoih8oun gia na allajoyn dramatika ton tropo allhlepidrashs me to susthma. Me th glwssa HTML, mporeite na xtisete ena Interface toy opoioy o monos periorismos 8a einai h fantasia twn dhmioyrgwn. H omorfia sth xrhsh texnologiwn Intranet gi'ayto einai oti einai toso aplo. Patwntas se ena hyperlink apo HTML mporeite na pate se allh selida, na akousete enan proeidopoihtiko hxo, na trejete mia yearend diadikasia h otidhpote allo mporei na kanei enas ypologisths.

6 Perissotera pragmata poy mporeite na kanete

Na mia lista apo endiaferonta pragmata poy mporeite na kanete me to Linux Intranet server. Olo to logismiko poy anaferetai parakatw einai freeware h shareware.

- Browse to Linux server xrhsimopoiwntas to Network Neighbourhood se Win95/ NT. Egkatastash enos NBT server tupoy WINS. Koitajte th Web selida ths SAMBA sto `http://lake.canberra.edu.au/pub/samba/samba.html`
- Ylopoihste mia mhxanh anazhthshs sto Intranet. Synde8eite sto ht://Dig sto `http://htdig.sdsu.edu/`
- Xrhsimopoihste to CUSeeMe sthnontas ena topiko reflector. Anafora sth selida toys sto Cornell `http://cu-seeme.cornell.edu/`
- Egkatasthste to Web Conferencing. Xrhsimopoihste to COW apo to `http://thecity.sfsu.edu/COW/`
- Anaptujte mia SQL bash. Anafora sthn mSQL Home page sto `http://Hughes.com.au/`
- Egkatasthste FTP,Gopher,Finger,Bootp servers ston Netware server. Mporeite na ta breite sto `http://mft.ucs.ed.ac.uk/`
- Prosomoiwsh toy Netware server. Elegjte tis NCP efarmoges sto `ftp://sunsite.unc.edu/pub/Linux/system/filesystems/ncpfs/`

An breite tipota endiaferon poy mporeite na kanete me ton Linux Intranet server, steilte moy ena mail.

7 Eyxaristies kai Pneymatika Dikaiwmata

7.1 Eyxaristies

Eyxaristoume toys an8rwpoys sth NCSA poy mas edwsan toso kalh tekmhriwsh, ton David Anderson kai oloys toys alloys poy dokimasan ayto to HOWTO kai esteilan ta sxolia toys. Oi leptomereies gia to Netware/IP einai mia eygenhs prosfora toy Romel Flores (rom@mnl.sequel.net).

7.2 Pneymatika Dikaiwmata